

Remarks

Claims 1, 4-8, 12, 13 and 15-17 were pending.

Claims 16 and 17 are cancelled; claim 8 is withdrawn by the Examiner.

Claims 1, 4, 6 and withdrawn claim 8 are amended.

Claims 5, 7, 12, 13 and 15 are as previously presented.

The application now contains claims 1, 4-7, 12, 13, 15 and withdrawn claim 8.

Claim 1 is amended at the end of component c) to limit the ration of hydrocarbon to compound of formula (I) to from 17:1 to 76:1. Support is found in the specification, page 6, lines 21-24.

Claim 4 is amended to delete "p-cumene" from line 2; claim 6 is amended to delete all material following the term "alicyclic" in line 1. Withdrawn claim 8 is amended to be dependent on claim 5 and to limit the substrate in line 2 to a polycarbonate or poly methyl methacrylate substrate. Support is found in the specification, page 2, lines 14-15.

No new matter is added.

Rejections

Claims 1 and 4 are rejected under 35 USC 102(b) as anticipated by Weber, FR 1600332 which discloses a composition for semipermanent tattoos comprising 3 parts p-cumene, 25 parts cyclohexane and 2 parts colorant.

Applicants respectfully traverse the rejections.

Applicants believe that there is a fundamental difference between the instant compositions and those of Weber, as addressed below, but further note that the instant amendments, designed to more fully focus on certain aspects of the invention, remove any anticipation by Weber. Specifically, claim 1 is now limited to a solvent ratio of 17:1 to 76:1, of linear, branched and/or cyclic non-aromatic hydrocarbon to aromatic hydrocarbon of formula I. There is one mention of hexane in combination with p-cymene in Weber with a ratio of 25:3, i.e., that is, 8 $\frac{1}{3}$:1, which is well outside the instant 17:1.

Thus Applicants respectfully aver that no anticipation exists and kindly ask that the rejections of claims 1 and 4 under 35 USC 102(b) over Weber, FR 1600332 be withdrawn.

Regarding the fundamental difference between the two inventions, Applicants respectfully point out that the instant composition is a liquid composition comprising a dye. A "dye" is generally understood to be a colorant that is soluble in the medium in which it is used, thus the liquid composition of the invention relates to a solution of dye in the recited solvents. This definition of the instant liquid composition is reinforced by the subject matter of the specification, i.e., a liquid composition for manufacturing optical media. The requirements of such a composition are extremely exacting and require dissolution of the dye.

On the other hand, the composition of Weber is not a liquid composition, as understood by Applicants. Rather, Weber provides a **pencil** (French "crayon") – that is, a solid composition (more exactly, a suspension comprising 48% of organic liquid as well as totally 52% of zinc stearate and water in unknown proportion). Please note the French definition of "stick" from Wikipedia.org, "un conditionnement de produit en forme de bâton, comme pour la colle à papier ou pour le soin des lèvres", which means in English "a product conditioning [form] in the form of a stick, such as for paper glue or lip care".

Applicants note that the present Action refers to the scope of the instant claims in a manner which suggests that Applicants are over reaching in their claims. Applicants point to the rationale for the present restriction, that the present compositions have uses other than the preparation of optical media. Also, the Examiner states that the data of instant Example 2 does not extend to the coating of other substrates.

Applicants hasten to point out that the present composition is not just a solution of a dye in a hydrocarbon solvent; it is a solution of a dye in a particular blend of solvents which shows surprising benefits in the preparation of optical media. In the preparation of these media, the choice of solvent for the dye is critical and must provide certain characteristics beyond solubility and compatibility. The solvent system must ensure that a thick layer is deposited in the grooves of the substrate while at the same time forming only a thin layer on other nearby regions, and upon evaporation of the solvent system (during which the solvent ratio varies), the dye needs to be deposited as a uniform, fully amorphous solid. It is not fully understood at present what factors lead to the desired end results, suggestions as probable factors include the kinetic viscosity, the surface tension, the volatility and ability to form azeotropes. However, at the present time there is no way to predict which solvents will function adequately.

In light of the preceding discussion, Applicants respectfully submit that the claimed composition is novel over the art and provides surprising results, which, under a simple reading of the rules, makes the claims allowable, at least over Weber. However, as related above, the Examiner notes that the composition can be possibly used for other purposes where surprising results are not demonstrated. Applicants point out that the instant compositions are not as unduly broad as suggested in the Action. Only a small number of aromatic solvents are employed in the invention and these are blended with a specified amount of non-aromatic hydrocarbon. The aromatic hydrocarbons are not rare, but are not nearly as ubiquitous as toluene, xylene, mesitylene etc. Applicants are therefore of the opinion that one practicing in a less demanding field, where any simple solution of dye in solvent, even a hydrocarbon solvent, would have no difficulty arriving at a suitable solution outside the instant compositions. However, Applicants respectfully maintain that their efforts in identifying these particular novel solutions and their surprising value of in certain demanding applications, such as the preparation of optical recording media, does qualify them for the patent protection they seek.

Claims 1 4-7, 12, 13 and 15 are rejected under 35 USC 103(a) as obvious over Kioke et. al., JP2002-109793 in view of Fabian et. al., US4,459,233. Kioke discloses solutions of phthalocyanine dyes in mixtures of selected non-aromatic and aromatic solvents; Fabian discloses the purification of phthalocyanine dyes using immiscible mixtures of solvents. Kioke does not disclose the instant aromatic solvents; Fabian mentions the use of iso-propyl and iso-butyl benzene in the purification process. The Action holds that it would be obvious for one skilled in the art to use the solvent of Fabian in the solution of Kioke to arrive at the instant invention.

Applicants respectfully traverse the rejections.

Applicants respectfully note that Fabian does not prepare a solution of the dye; instead, Fabian prepares a slurry or paste of a pigment, e.g., column 1, lines 28-37 and the examples. Fabian also equates all aromatic solvents, column 2, lines 29-54, and singles out xylene and halogenated hydrocarbons, column 2, lines 55-56. While Applicants hesitate to suggest that Fabian is disparate art, Applicants can find nothing in Fabian to suggest the suitability of aromatic hydrocarbons as a co-solvent for the instant dye **solutions**, nor is there any suggestion in Fabian to select these particular aromatic hydrocarbons over other solvents, such as halogenated hydrocarbons.

Applicants further respectfully note that even if combined as suggested in the action, Kioke and Fabian fails to disclose or in any way suggest the surprising improvements in properties of the optical media summarized on page 16 of the instant Specification. Applicants further note that the combination of art fails to suggest the groove filling level attainable by the instant invention, for example, in Kioke the layer thickness reaches only 95nm in the 172 nm deep groove (see examples 1 [0034] and 3 [0039]).

Applicants point out that Kioke discloses the use of particular solvents that can be used in the preparation of dye solutions, useful in coating optical media, which can be stored between uses due to the lack of peroxide build up. Kioke specifically discloses the aromatic solvents toluene, p-xylene, o-xylene, ethylbenzene and mesitylene are to be used because of their higher compatibility with polycarbonate and acrylic resin. There is no teaching or suggestion that any other aralkyl compounds should be used or could be more suitable. Applicants refer to the discussion above that there are specific and rigorous demands placed on the solvents employed in preparing optical media and that it is not possible at the current time to predict which solvents will perform the best.

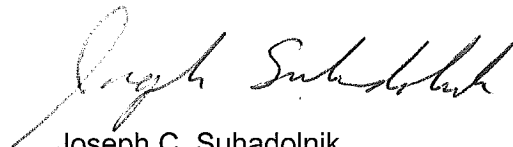
Applicants respectfully note that to establish a case for obviousness, the cited combination of art must in some way suggest to the practitioner that he select each of the particular elements of the invention. Applicants take the position that there is no teaching in the combination of Kioke and Fabian that would cause one to select the compounds of instant formula I as co-solvents to be used with a non-aromatic hydrocarbon to prepare a dye solution that would provide the observed improvement in the manufacture of optical recording media. Applicants therefore respectfully aver that the cited therefore fails to adequately suggest the invention.

Thus Applicants respectfully submit that the rejections under 35 USC 103(a) over Kioke et. al., JP2002-109793 in view of Fabian et. al., US4,459,233 are overcome and kindly ask that the rejections be withdrawn.

Applicants respectfully submit that the claimed composition is novel over the art and provides surprising results. Applicants further respectfully submit that all rejections have been addressed and are overcome and kindly ask that they be withdrawn and that claims 1, 4-7, 12, 13 and 15 be found allowable. Applicants further kindly ask that upon finding the claims allowable that claim 8 be rejoined as containing a novel and non-obvious linking technical feature and also found allowable

In the event that minor amendments will further prosecution, Applicants request that the examiner contact the undersigned representative.

Respectfully submitted,



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